



PLATE 11

Pupa of *Nemoria pistaciaria*, dorsal, lateral and ventral aspects, enlarged x 7.

Photo by Edw. Cobb.

The thorax is less robust than in the last named species and the head is proportionately larger and more rounded. In other respects the pupa closely resembles that of *pulcherrima*, as will be noted by reference to Plate 11 of this issue in comparison with Plate 40 of the May - August, 1937 issue of the "Bulletin".

Our pupae of *pistaciaria* gave forth imagines in April of this year rather than carrying over a season, as did *N. pulcherrima*. Our series of *N. pistaciaria* records captures in the months of May (Petaluma, Cal.), June and July (San Diego), September (San Diego), October and December (Los Angeles), and it would therefore seem that the species is multiple brooded.



A NEW LAND SHELL FROM LOWER CALIFORNIA

By G. WILLETT

On February 22, 1937, Mr. and Mrs. Emory P. Chace and the writer spent an hour or more searching for land shells among rocks on a hillside about nine miles north of Ensenada, Lower California. As a result of our work we obtained three adult, or sub-adult, and two juvenile specimens of a species unknown to us. As the larger specimens were all more or less worn and

bleached, they were laid aside to await accumulation of more material.

On April 21, 1940, the locality was again visited by Mr. and Mrs. Chace, on this occasion accompanied by Dr. W. O. Gregg, and, although no living specimens were found, enough additional material was secured to permit a more comprehensive study of the shell. As these specimens appear to represent a species unknown to science, it may be known as:

MICRARIONTA (? EREMARIONTA) CHACEI, new species.

(Plate 12)

Description: Shell of moderate size, considerably elevated. Whorls 5 to $5\frac{1}{4}$, rounded. Outer lip strongly descending, slightly reflected. Umbilicus almost entirely covered by the expanded columella. Aperture oblique.

Embryonic whorls transversely wrinkled for a fraction of a turn, then very finely papillated; over this are scattered larger, elongated papillae, rather widely and irregularly spaced. These larger papillae disappear at the end of the second nuclear whorl (the finish of the first growth stage). From this point forward the smaller papillae become finer and more sparse until they disappear near the beginning of the fourth turn. The remainder of the shell is smooth excepting for numerous growth lines.

Periostracum thin and polished. General color near Buffy Brown, with a conspicuous band of Vandyke Brown, about 1 to $1\frac{1}{2}$ millimeters wide, and bordered above and below by poorly defined lighter areas, encircling the shell just above the periphery. (The color characters were not taken from the type, but from a fresher—though imperfect—specimen which is preserved with the type.)

TYPE No. 1062 Los Angeles Museum, was collected by G. Willett among rocks on the southeast side of the highway, just south of highway bridge, at lower end of El Tigre Canyon, about 9 miles north of Ensenada, Lower California, Mexico, February 22, 1937. It has $5\frac{1}{4}$ whorls and measures in millimeters: Max. diam., 21.9; min. diam., 18; alt., 16.4. Paratypes are in the collections of Mr. and Mrs. Chace, Dr. Gregg and the writer.

REMARKS: This species can hardly be confused with any previously described. In color, altitude, strongly descending lip and nearly closed umbilicus, it resembles some examples of *M. wolcottiana* (Bartsch), but the sculpture of the nuclear whorls is very different. In the latter feature it is practically identical with *M. inglesiana* Berry, but that shell is much flatter and has an open umbilicus. From *M. merrilli* (Bartsch) and *M. peninsularis* (Pilsbry), *chacei* differs in its closed umbilicus and, from the former at least, in different sculpture of the early whorls.

Because the sculpture of the nuclear whorls of *M. chacei* is practically identical with that of *M. inglesiana*, I have tentatively followed Dr. Berry and assigned this species to the sub-genus *Eremarionta*. However, it does not seem certain that such assignment is the correct one. I do not know of any other species of *Eremarionta* with nuclear sculpture like that of *inglesiana* and *chacei*, in fact, as Pilsbry has pointed out (Land Mol., N. Am., 1939, p. 204), in this feature these two species appear to resemble some *Helminthoglyptas* more closely than they do typical *Eremariontas*. It is probable that a definite assignment can not be made until the anatomy of one or both species is studied.

I take pleasure in naming this shell for Mr. and Mrs. Emory P. Chace, who are well and favorably known, not only for their diligence in collecting, but for their willingness to cooperate with other students of conchology.



PLATE 12

Micrarionta chacei
Willett.